

## Abstract

**Title:** A Change in Blood Flow to the Muscle during Compression Therapy

**Objectives:** The main objective of this work is to determine the change in muscle blood flow during compression therapy, specifically during flossing. Another objective is to get acquainted with compression techniques.

**Methods:** In our work, we used an anamnesty questionnaire to get basic information about probabilities. Flossing was applied to the right shoulder for two minutes. The flow measurement was carried out on Précisé 8008 and the data were evaluated using descriptive statistics, testing using a linear model, an ANOVA and T-test.

**Results:** We found that the development of blood flow to the biceps brachii muscle during and after application is variable. After application of flossing, there are statistically significant changes in blood flow to the upper limb (where flossing was applied) and subsequently, after application, there is an improvement in muscle blood flow ( $TcpO_2$ ). There is also a change in blood flow to the opposite limb (where flossing has not been applied), but this change is statistically significant at the time of the lowest blood flow to the limb where flossing was applied and 15 minutes after the lowest perfusion was measured. Furthermore, flossing was found not to return rapidly to baseline in the upper limb where flossing was applied, as the mean time to decline is shorter than the time to return to baseline, and this difference is statistically significant.

**Keywords:** flossing, compression methods, oxygenometry, muscle perfusion